

DOCUMENTED CHROMOSOME NUMBERS 1997.1. CHROMOSOME NUMBERS IN COMPOSITAE FROM MOROCCO AND SPAIN

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ABSTRACT

Chromosome numbers from 18 populations, which represent 14 species (1 represented by 2 varieties) from 11 genera, 4 tribes, of Compositae, confirm reports for the plants.

RESUMEN

Los números cromosómicos de 18 poblaciones, que representan 14 especies (1 con 2 variedades) de 11 géneros, 4 tribus, de Compositae, confirman lo registros para estas plantas.

Although chemical methods increasingly dominate the current vogue, chromosome numbers continue to be important indicators of evolutionary (and taxonomic) relationships among plants (cf. Stebbins 1993).

MATERIALS AND METHODS

Source-plants reported on here were collected and identified by Watson. Voucher specimens have been deposited in the herbarium of Miami University (MU). Chromosome counts were made by Strother from meiotic figures in acetocarmine-stained squashes (in Hoyer's mountant) of sporophytic (pollen parent) cells from floral buds fixed in a solution of 3 parts 95% ethanol: 1 part acetic acid (see Radford et al. 1974; Sharma and Sharma 1980).

RESULTS

Chromosome counts reported here confirm previously reported numbers for the counted taxa (as cited in standard indices, e.g., Goldblatt and Johnson 1996 and references therein).

Anthemideae

Aaronsohnia pubescens (Desf.) K. Bremer & Humphries. $2n = 9$ II. Morocco, S of Geurcif, along Rte. S329 at Fritissa, Watson 95-19A.

Anacyclus clavatus (Desf.) Pers. $2n = 9$ II. Morocco, ca. 8 km NW of Ifrane along Rte. S309, Watson 95-12C; Spain, SE of Seville at Villaluenga del Rosario, Watson 95-29C.

Anacyclus radiatus Loisel. $2n = 9$ II. Spain, NE of Seville, S of Lora del Rio at Guadalquivir River, Watson 95-4E; Spain, E of Cadiz at Medina-Sedonia, Watson 95-37A.

Anthemis arvensis L. $2n = 9$ II. Spain, SE of Seville at Villaluenga del Rosario, Watson 95-29B.

Chamaemelum mixtum (L.) All. $2n = 9$ II. Morocco, along Rte. P24 between Ifrane and Azrou, Watson 95-13G.

Chamaemelum nobile (L.) All. $2n = 9$ II. Morocco, between Ito and Azrou, Watson 95-14C; Spain, SE of Seville, at Villaluenga del Rosario, Watson 95-30B.

Chamaemelum nobile var. *discoidea* (L.) All. $2n = 9$ II. Morocco, along Rte. P24 between Ifrane and Azrou, Watson 95-13B.

Chrysanthemum coronarium L. $2n = 18$ (8 II + 2 I, chain of 3 + 7 II + 1 I, etc.). Spain, SE of Seville at Montellano, Watson 95-8C.

Chrysanthemum segetum L. $2n = 9$ II. Morocco, along Rte. P24 between Ifrane and Azrou, Watson 95-13A.

Cladanthus arabicus (L.) Cass. $2n = 9$ II. Morocco, along Rte. P1 between Oujda and El-Aloun, Watson 95-20A.

Glossopappus macrotus (Durieu) Briq. $2n = 9$ II. Spain, S of Seville between Arcos and El Bosque, Watson 95-26C.

Otanthus maritimus (L.) Hoffmanns. & Link. $2n = 9$ II. Spain, W of Algeciras at Cabo de Trafalgar, Watson 95-36A.

Calenduleae

Calendula incana Willd. subsp. *agarbiensis* (Boiss.) Ohle. $2n = 16$ II. Spain, W of Algeciras between Zahara de Los Atunes and Punta Comarinal, Watson 95-34B.

Inuleae

Pallensis spinosa (L.) Cass. $2n = 5$ II. Morocco, NE of Fez at J. Zalagh, Watson 95-10C.

Lactuceae

Hypochaeris achyrophorus L. $2n = 6$ II. Morocco, along Rte. S309 ca. 15 km NW of Ifrane, Watson 95-11B.

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REFERENCES

- GOLDBLATT, P. and D.E. JOHNSON. 1996. Index to plant chromosome numbers 1992–1993. *Monogr. Syst. Bot. Missouri Bot. Gard.* 58:i–x + 1–276.
- RADFORD, A.E., W.C. DICKISON, J.R. MASSEY, and C.R. BELL. 1974. Vascular plant systematics. New York: Harper & Row.
- SHARMA, A.K. and A. SHARMA. 1980. Chromosome techniques: Theory and practice. Ed. 3. London: Butterworths.
- STEBBINS, G.L. 1993. Concepts of species and genera. In: Flora of North America Editorial Committee, eds. *Flora of North America North of Mexico*. London & New York: Oxford University Press. Vol. 1, pp. 229–246.